

In the Drawings

It is noted that the Examiner has requested that Figure 1 be annotated with the legend -Prior Art-. A replacement Figure 1 (labelled "Replacement Sheet") is included and it is requested that this be substituted for the Figure 1 on file. This replacement figure is a clean version of an amended drawing including the requested legend.

REMARKS

Applicant respectfully requests reconsideration. Claims 1-22 were previously pending in this application (the Office Action Summary erroneously indicates claims 1-21). Claim 19 has been amended. No claims have been added. As a result, claims 1-22 are pending for examination with claims 1, 2, 20 and 22 being independent claims. No new matter has been added.

Drawings

The Examiner has requested that Figure 1 be annotated with the legend –Prior Art-. A suitably amended replacement Figure 1 is included and it is requested that this be substituted for the Figure 1 on file.

Claim Objections

An objection has been lodged against claim 19. The Examiner explains that it is unclear how a ratio can be “coupled” to transistors. An amended Claim 19 is presented. The amendment (which supplies inadvertently omitted words) will be self-evident and removes the concern about reciting coupling between a ratio and the transistors. With this amendment, the objection is overcome.

Claim Rejections - 35 USC §102

Claims 1-11, 17, 18, 20 and 22 have been rejected under USC 102(e) as anticipated by U.S. Patent 6,808,307 (hereinafter referred to as Aslan). As Aslan does not show each and every feature of the recited claim, however, the rejection is unfounded.

Referring to claim 1, the Examiner has failed to note a distinguishing limitation. The claim details, *inter alia*,

“...each ratio provided by a plurality of (N+1) equivalent current sources coupled in common to a current output, the first term of each ratio being defined by a

selected one of the plurality of current sources and the second term of each ratio being defined by the remaining current sources of the plurality of current sources..." (Emphasis added. This is not taught by Aslan.).

Using the example of 16 current sources, as illustrated in the embodiment of Figure 3 and Table 1 of the instant application, what this limitation means is that as the first term of the ratio is changed that the second term of the ratio also has to change- see page 13 lines 29-32. In contrast, all that Aslan provides is a change of the first term; *the second term is always the sum of all the current sources*. Aslan does not provide for the second term to be defined by all current sources other than that current source defining the first term. In essence the ratio provided by Aslan is similar to what is provided by the ratio of USP 5,990,725 which is referred to in the instant application on pages 4 and 5. In the '725 patent and Aslan, the ratio is defined by a selected one of the available current sources relative to the sum of all the available current sources- see for example Aslan Col. 5 lines 35-39, where the X1 and X16 are defined. This is not the same as the present invention where all current sources are never applied simultaneously.

The use of the configuration of Aslan requires the selective switching on and off of the current sources, which can introduce temperature dependencies into the chip, in a manner similar to the problem associated with USP 5,990,725 - see page 5 lines 23-28 of the instant application. For this reason alone, it is apparent that the instant application is distinguishable from Aslan. As all the features of claim 1 are not shown in Aslan, that reference does not anticipate the claimed invention.

This definition of how the current sources are combined is not an arbitrary difference. It provides for a number of advantages. Firstly, the selective changing of the current sources defining the numerator and denominator of the current ratio, in a manner defined by the present invention, does not require the selective switching on and off of the current sources, thereby addressing the temperature dependency problem identified above. Secondly, using such a configuration, the current source array of the present invention can be used in conjunction with two measurement paths- something that is not possible with the prior art configurations. Thus,

the present invention is not only different from, but also advantageous over, the configurations of the prior art.

Claims 2, 20 and 22 also use substantially the same definition of the ratio as used in claim 1. Therefore, the same argument used above with respect to claim 1 applies *mutatis mutandis* with respect to claims 2, 20 and 22, and their rejection fails.

Claims 3-11, 17 and 18 depend from claim 2 and inherit its distinguishing features.

Accordingly, the rejection of claims 1, 2-11, 17, 18, 20 and 22 should be withdrawn.

Claim Rejections - 35 USC §103

Claims 15 and 16 stand rejected as obvious over the combination of Aslan with USP 5,982,221 of Tuthill. However, claims 15 and 16 being dependent on claim 2, the rejection is premised on claim 2 having been properly rejected under §102(e), which we now know to be incorrect. As shown above, claim 2 is not taught by Aslan. Tuthill does not teach the missing limitations found in claim 2. Thus no combination of Aslan and Tuthill (assuming, *arguendo*, they are properly combinable) provides for the specific limitations of claims 15 and 16.

Next, claims 12-14 and 21 are rejected as obvious over combination of Aslan with publication US 2001/0026576 of Beer. From above remarks, despite the Examiner's assertion to the contrary, it will be clear that the subject matter of claim 2 is not known from Aslan. Claims 12-14 and 21 all refer to the definition (used in claim 2) of how the current sources are combined to provide the ratio. This definition is taught by neither Aslan nor Beer. Thus, even were the references combined (assuming, *arguendo*, such combination to be proper), the resulting combination would not be the claimed invention. Accordingly, the rejection should be withdrawn.

Conclusion

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Respectfully submitted,

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